1. Simple Cubic (SC)
    a. Sketch the structure
    b. Determine the lattice constant, a, in terms of the atomic radius, r, for the structure. (You may have to adjust the size of your atoms in the sketch to visualize this. Think about where the atoms touch in the system.)
    c. Using the equation to define the atomic packing factor (APF) of a crystal structure. Determine the APF. Show your work.

2. Body Centered Cubic (BCC)
    a. Sketch the structure
    b. Determine the lattice constant, a, in terms of the atomic radius, r, for the structure. (You may have to adjust the size of your atoms in the sketch to visualize this. Think about where the atoms touch in the system.)
    c. Using the equation to define the atomic packing factor (APF) of a crystal structure. Determine the APF. Show your work.

3. Face Centered Cubic (FCC)
    a. Sketch the structure
    b. Determine the lattice constant, a, in terms of the atomic radius, r, for the structure. (You may have to adjust the size of your atoms in the sketch to visualize this. Think about where the atoms touch in the system.)
    c. Using the equation to define the atomic packing factor (APF) of a crystal structure. Determine the APF. Show your work.

4. Which structure has the highest packing factor?